



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



6th Joint National Steering Committee Meeting, 8 July 2021
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International Maize and Wheat Improvement Center



BACKGROUND

- Financed under the Feed the Future Initiative of U.S. Government (USAID)
- Project period: April 2016 – March 2022
- Budget: US\$ 15 Million
- 26 Districts (Sudur Paschim 6, Karnali 5, Lumbini 10 and Bagmati 5)
- Focussed Crops: Maize, Rice, Lentil, Cauliflower, Tomato, Onion
- Aligned with the GoN ADS and Seed Vision and USAID Nepal GFSS Country Strategy

GOAL:

To build competitive and synergistic seed and integrated soil fertility management (IFSM) systems for inclusive and sustainable growth in agricultural productivity, business development, and income generation in Nepal





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Province	District (No)	Districts
Sudur Paschim	6	Achham, Baitadi, Dadeldhura, Doti, Kailali and Kanchanpur
Karnali	5	Dailekh, Jajarkot, Salyan, West Rukum and Surkhet
Lumbini	10	Arghakhanchi, Gulmi, Palpa, Pyuthan, Rolpa, East Rukum, Kapilvastu, Banke, Bardiya and Dang
Bagmati	5	Sindhuli, Kavre, Makwanpur, Nuwakot and Sindhupalchowk
Total	26	



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SEED COMPONENT

- Increase accessibility of quality seeds and its adoption by farmers
- Establish seed testing/ development, monitoring and distribution platform through public-private partnership
- Enhance in-country seed system by strengthening partners' capacity
- Support production and distribution of quality seed
- Increase business capacity and financial access to seed enterprises

FERTILIZER COMPONENT

- Capacity enhancement of public and private partners in developing and employing Integrated Soil Fertility Management (ISFM) technologies
- Develop and deploy domain-specific ISFM recommendations
- Assess fertilizer demand and use
- Strengthen fertilizer supply chains and markets
- Scale ISFM through dealers, retailers, cooperatives, and development partners

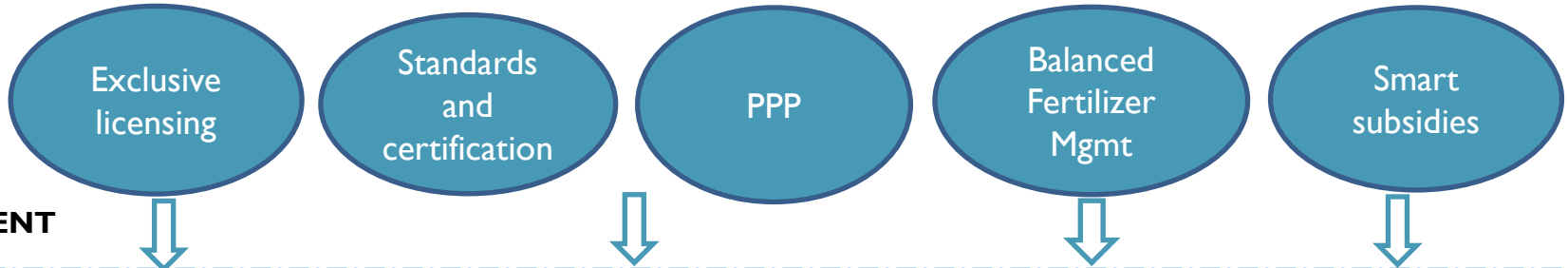




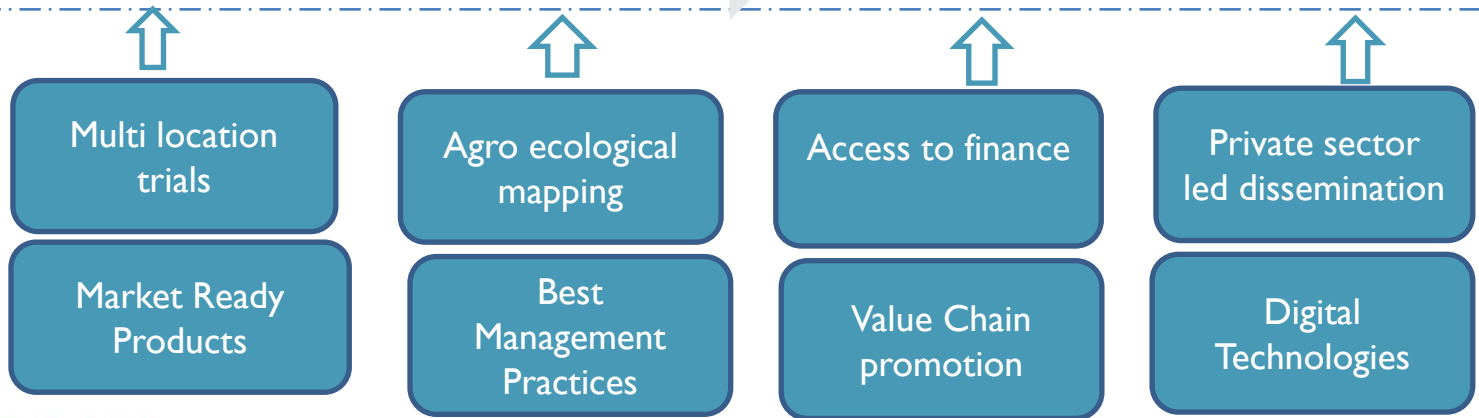
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ENABLING ENVIRONMENT



BUSINESS & EXTENSION SERVICES



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PARTNERSHIPS

- MoALD (SQCC, DoA)- policy and scaling
- NARC- maize, rice, horticulture and legumes commodity programs & NSSRC
- AKCs, IALDOs and local Governments
- CEAPRED- vegetable seed trials & demos
- Private Seed Companies (8) and Coop (3) & SEAN: seed production, marketing & policy
- Cooperatives (44): fertilizer trials and scaling
- IFDC- fertilizer marketing & policy
- USAID projects: KISAN II, IPM



TARGETS OCTOBER- MARCH 2021

Indicators	Targets (Actual)
EG 5.2-1: Number of firms receiving USG-funded technical assistance for improving business performance	65 (67)
EG 3.2-1: Number of individuals who have received USG supported short-term agricultural sector productivity or food security training	1498 (1593)
EG 3.2-4: Number of for-profit private enterprises, producer organizations, water user associations, women groups, trade and business associations, and CBOs receiving USG food security related organizational development assistance	106 (108)
EG 3.2-7: Number of technologies, practices, and approaches under various phases of research, development, and uptake as a result of USG assistance	Demonstrated uptake by public and/or private sector - 2 (2)



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STRATEGIC PROGRESS

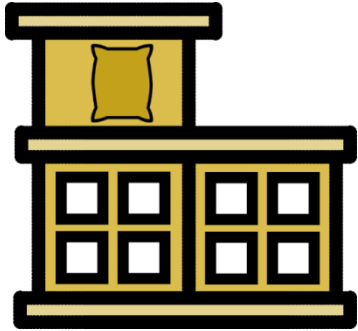


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WORKING WITH PRIVATE SEED COMPANIES



- Business mentoring
- Staffing with required personnel
- Capacity building
- Diversified products portfolio

- Business plan development
- Access to finance
- Value chain approach
- Market access

- Increased sales volume
- Improved seed quality
- Increased business literacy





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INTRODUCTION, VALIDATION AND COMMERCIALIZATION OF NSAF'S CROP VARIETIES





VARIETY TESTING BY PUBLIC AND PRIVATE SECTOR

- 1083 new maize, 21 Veg, 11 lentil products tested with partners
- 10 maize products (including parental lines and breeder seeds) allocated to partners – Zn enriched, QPM, yellow single & three-way cross hybrids, Provitamin A and white OPVs
- Average yield of maize hybrids >10 t/ha





PUBLIC PRIVATE POLICY DIALOGUE

- SEAN organized a dialogue with MOALD on seed variety registration in February 2021.
- SEAN shared the status of seed supply in Nepal, issues with the variety registration guidelines (2013), the need for hybrid seed production licenses for the private sector and the importance of promoting formal imported vegetable seed markets
- SQCC presented the status, key issues and potential measures to formalize vegetable seed imports. Highlighted complex registration process and dramatic increase in informal seed imports.
- MoALD Secretary set up a committee to draft two protocols -
 - *imported vegetables seed testing and registration protocol*
 - *varietal development and maintenance licenses for private sector companies*





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Joint Monitoring Visit to Hybrid Maize Production Sites



VARIETY REGISTRATION

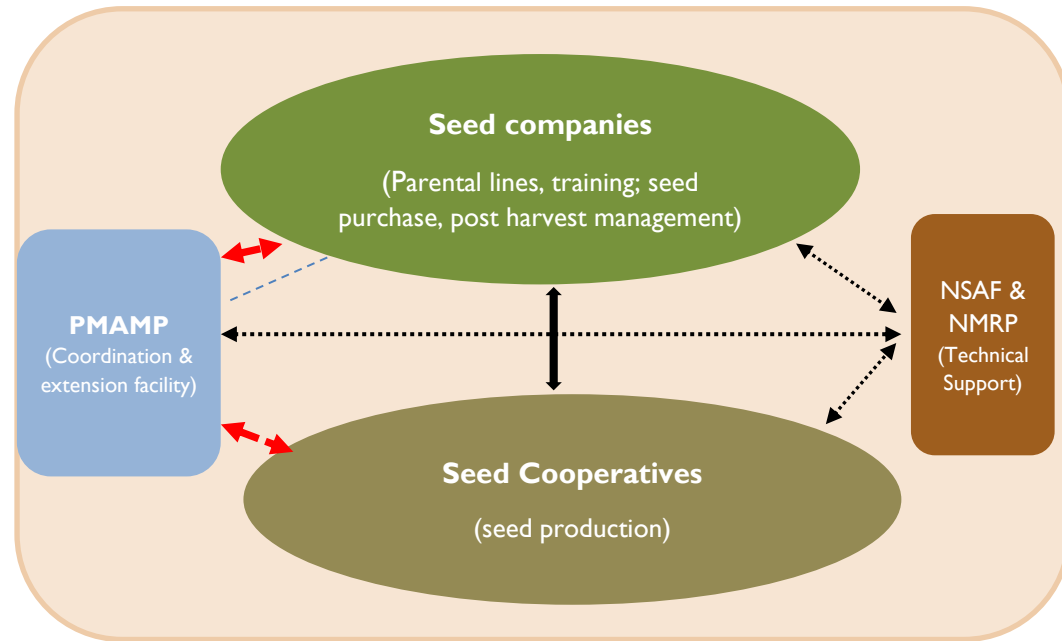
- Five Seed companies (Gorkha, SSSC, Lumbini, Unique, Panchashakti Seed Companies) applied in 2020 for R&D license
- Applications reviewed by SQCC and feedback shared with the concerned seed companies
- Two seed companies (Lumbini and SSSC) have re-applied for getting license in 2021
- Three companies are in a process to re-submit.
- Two hybrid tomatoes varietal proposal by SSSC, and submitted to SQCC for registration
- One zinc enriched synthetic white maize proposal by GATE-Nepal submitted to NMRP for review.



HYBRID MAIZE SEED PRODUCTION HUB

Hybrid Maize Hub - September 2020

- Competitive seed production – quality & price
- Dang selected considering PMAMP maize super zone, machinery hire, grain markets, & irrigation facilities & support services.
- Networking & coordination among seed companies
- Support services – investments on technology, finance, post harvest and business linkages

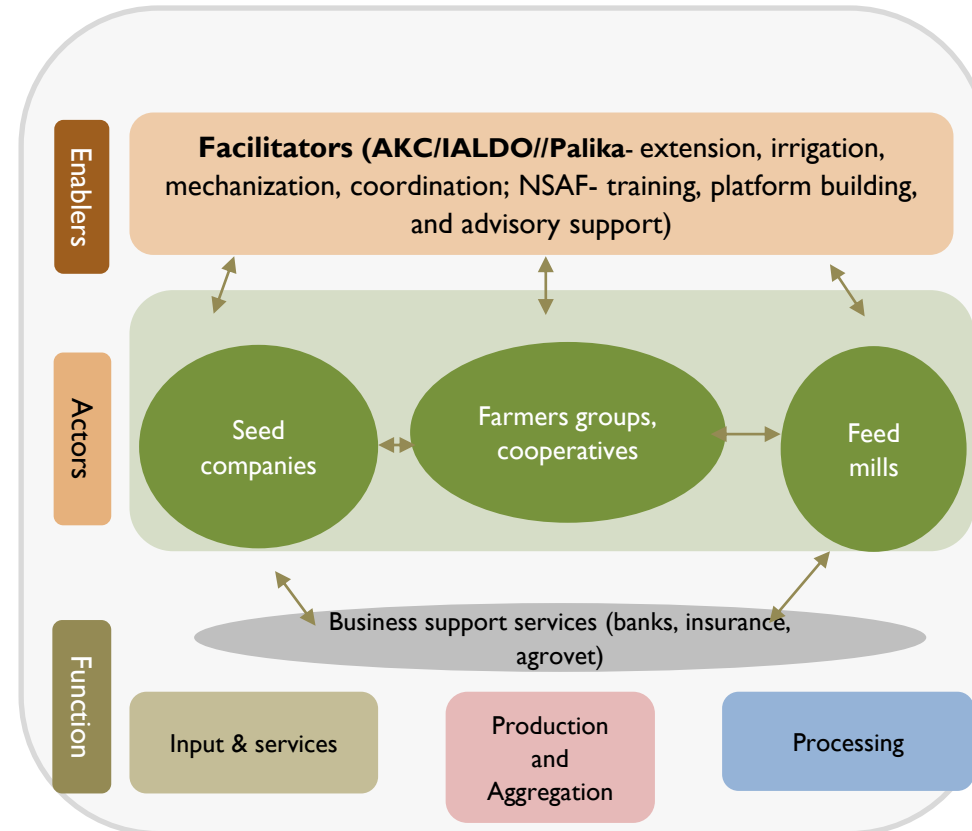


Progress so far

- Gorkha Seed planted RH 10 seed production activity in 9 ha and produced 4.5 MT seed
- Require proper crop management (weed and machineries), deployment of human resources and orientation of hybrid seed growers
- PMAMP allocated budget for hybrid maize seed production due to increased demand of hybrid seeds
- 2 new seed companies will start in 2021
- COVID-19 imposed challenges in monitoring and technical guidance

COMMERCIAL MAIZE MODEL WITH PPP APPROACH

- Commercial maize production targeting 0.4 million ha spring season fallow land in the terai
- Transfer of NSAF technologies on soil and maize crop management to extension agents and farmers
- Promote domestic maize hybrids and their suitable post-harvest, aggregation and market linkages in collaboration with feed mills
- A platform for improved business networking between feed mills, banks, insurance companies, AKC/IALDOs and local governments for maize commercialization.
- Employment for youth and migrants





COMMERCIAL MAIZE MODEL STATUS



- 872 farmers covering 297 ha under spring maize in Banke and Bardiya; 53% migrant households and 49% women-headed households; 30% area under RH-10, under the Smart Agriculture Village program.
- Harvesting ongoing & 1,700 MT maize grain expected
- 411 maize growers were trained on improved maize production, quality standards and support services; seed companies organized varietal and crop management demos
- Marketing and purchase contracts – Shreenagar Agro Industries, local traders, cooperatives
- AKC, IALDO and palika to support in grain dryers, community warehouse & storage; provide output-based incentives; increased seed production plan of RH 10 by seed companies





UPGRADING RICE SEED MARKETS

- Market development, branding and promotion of nationally developed varieties
- Subsidized loans of NRs. 200 million for technology upgrading
- Promoting newly released Ciherang Sub-1, Sambha Masuli Sub-1, Sawa Masuli, Bahuguni-2
- Shared rice trial and demo performance data, and seed availability; varietal demonstrations in CCDABC working palikas; trained 180 extension workers in BMP, IPM; technical support to output-based incentive schemes in collaboration with MoLMAC at Sudurpaschim province

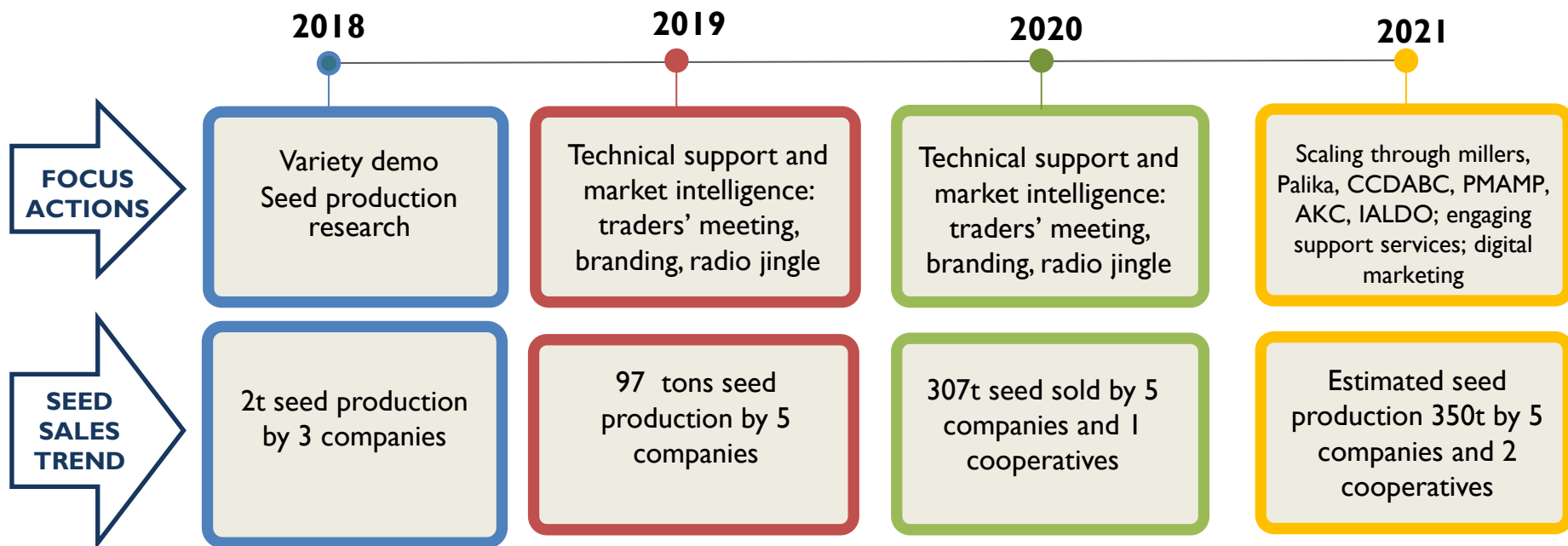




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Strategies to popularize fine rice varieties: A case of Bahuguni-2



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Integrated Soil Fertility Management (ISFM)

- Seed, fertilizer and organic inputs—adapted to local condition
- Conducted with NARC, DoA, PMAMP, agro-dealers and cooperatives

Nutrient omission trials—determine deficient nutrient/s

4Rs of nutrient stewardship



RIGHT SOURCE

Matches fertilizer type to crop needs.



RIGHT RATE

Matches amount of fertilizer to crop needs.



RIGHT TIME

Makes nutrients available when crops need them.



RIGHT PLACE

Keeps nutrients where crops can use them.

Improves

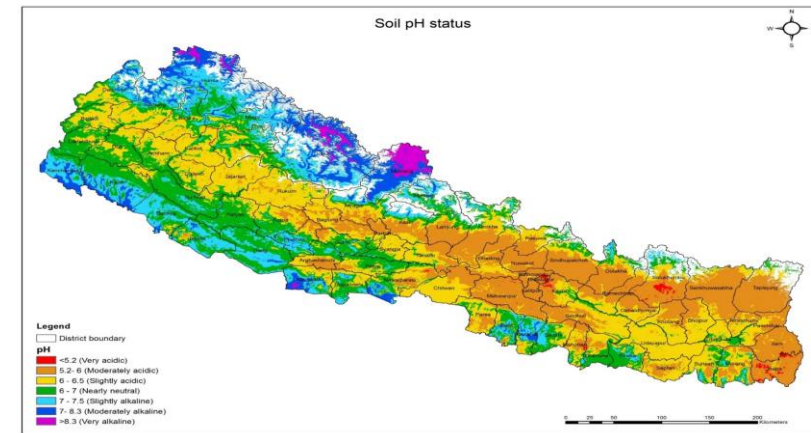
- Productivity
- Farm profitability
- Environment protection
- Sustainability





DIGITAL SOIL MAP LAUNCHED

- MOALD and NARC launched the digital soil map of Nepal the first its kind in South Asia
- (<https://soil.narc.gov.np>) hosted by NSSRC includes information on soil maps, weather information, best management practices of crops
- Used as input data for running a crop model, to calculate and map site-specific fertilizer recommendations
- To be tested with CCDABC for its use as a decision support system by Palikas, Provincial Governments & private sector
- NSSRC and DOA will train stakeholders and collect additional soil samples





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NSAF's interventions to develop domain specific fertilizer recommendation

NARC, universities, NSAF, MoALD, experts

DoA, AKCs, local govt., dev. partners & private sector



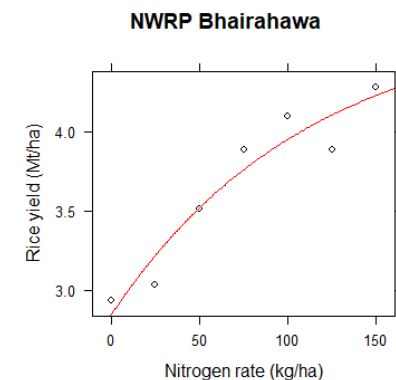
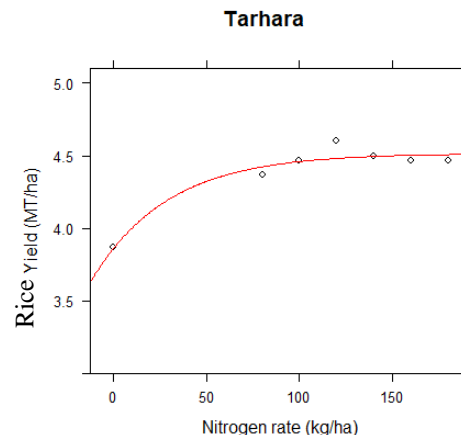
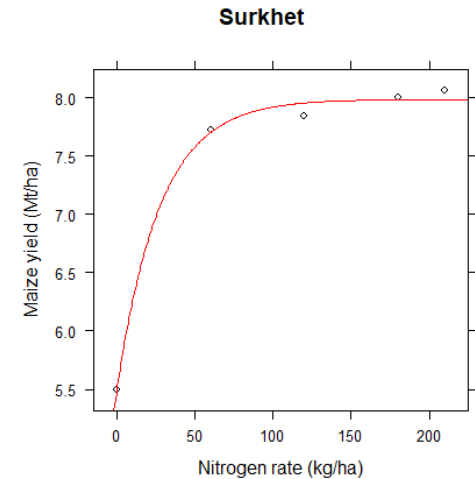
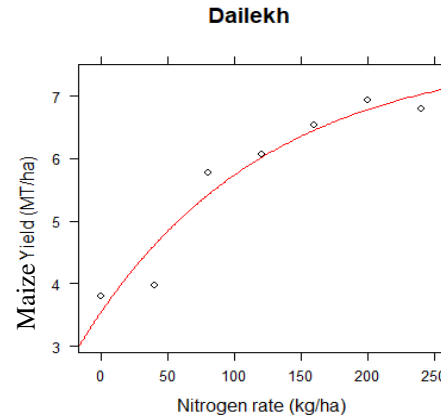
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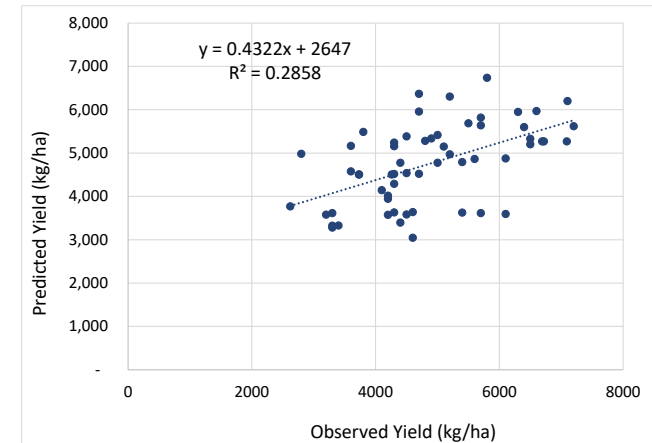
Developing Domain Specific Fertilizer Recommendations

- Multilocation trials confirm that the optimum rates varied across domains
- Conventional approach of fertilizer recommendations requires a large number of field trials across soil types, agro-ecologies, management conditions.
- To develop recommendations from fewer number of trials, a domain-specific approach of fertilizer recommendation developed (using QUEFTS model and machine learning approach).
- This approach was co developed with Soil Science Working Group formed by NSSRC – NARC and several consultations and review meetings were organized

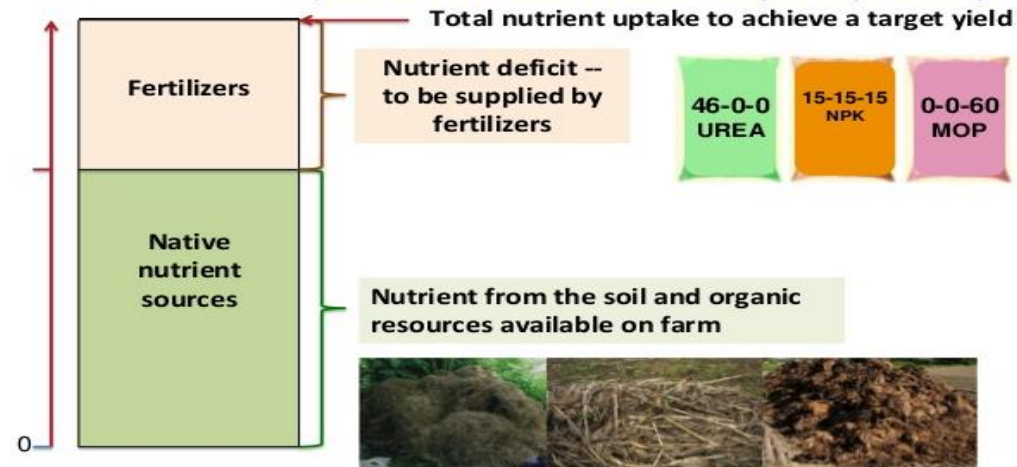


EXTRAPOLATION TO LARGER DOMAINS

- Calibration of QUEFTS model for rice is in progress
- Extrapolate NPK recommendations to a larger domain from limited point data to maps.
- DSM (as input data) will be used as a spatial basis for extrapolation
- NSSRC will organize a validation workshop in August 2021
- Scientists from different commodity programs will discuss the domain specific approach, validate QUEFTS model in rice, prepare timeline for announcing recommendations for rice and replicate the approach in other crops



Basic QUEFTS modelling approach (Quantitative Evaluation of the Fertility of Tropical Soils)





BALANCED SOIL FERTILITY MANAGEMENT

- Discussions held with MoALD to develop concept note on subsidy and pricing guidelines for blended fertilizers
- Institute for Integrated Development Studies engaged to work on the policy options for blended fertilizers
- IIDS is preparing a detailed assessment plan which will be presented to MOALD
- Continued support to AICL to take forward the construction of the blending plant.
- Improved fertilizer and seed management under ISFM umbrella scaled out through partnerships
- Import of blended fertilizers for 2nd season not possible due to lockdown





WORK PLAN

- Implement the COVID-19 response and recovery plan
- Facilitate variety registration by seed companies & hybrid seed production
- Review and expand the maize commercial model to Dang and Kanchanpur with additional feed mills
- Integrate additional features in DESIS and pilot a digital seed inspection and certification platform.
- Pilot test the Digital Soil Map to calculate demand of fertilizers in collaboration with CCDABC
- Assess status of implementation of the Fertilizer Distribution Directive Policy – work has already been initiated
- Policy assessment for the pricing of blended fertilizers in Nepal.
- Provide evidence-based policy recommendations for promoting seed and fertilizer businesses for private sector growth





COVID-19 RESPONSE

- Sites and HH are being selected in consultation with AKC, IALDO, Local Governments
- Gate Nepal Pvt Ltd., distributed 15,000 kg (Radha-4: 6,150 kg, and Samba Masuli Sub-1: 8,840 kg) to COVID-19 affected households in Banke and Bardiya in June 2021
- New varieties of maize and wheat seed to be distributed on 50% subsidy – 2000 HH
- Maize green cobs and roasting enterprise – 600 HH
- Vegetable Kitchen Gardens – 1800 HH
- Commercial vegetable production, post harvest and digital platforms – 10000 HH
- Support to agribusiness MSMEs to access BDS and finance

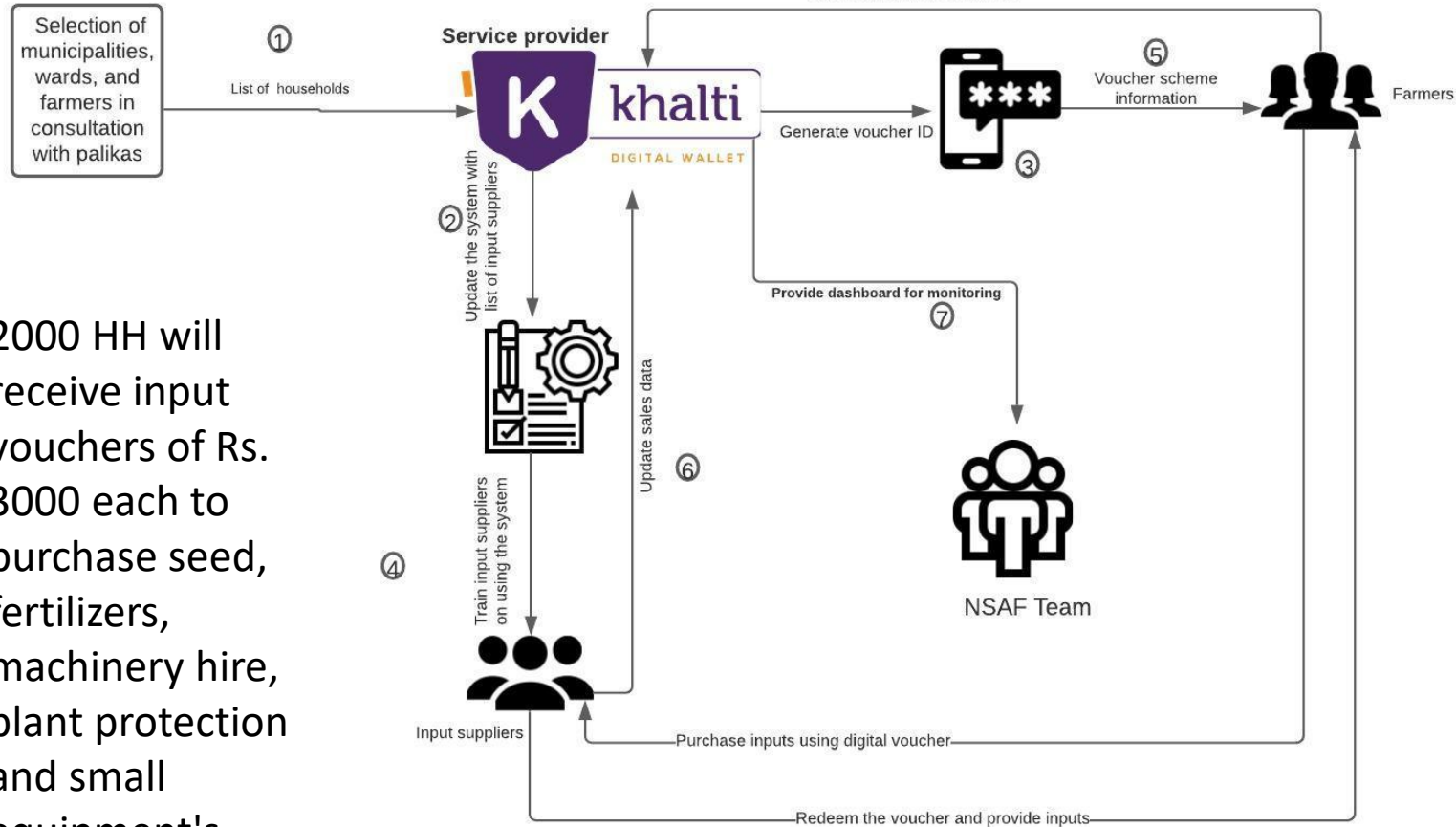




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Digital Input Vouchers



2000 HH will receive input vouchers of Rs. 3000 each to purchase seed, fertilizers, machinery hire, plant protection and small equipment's



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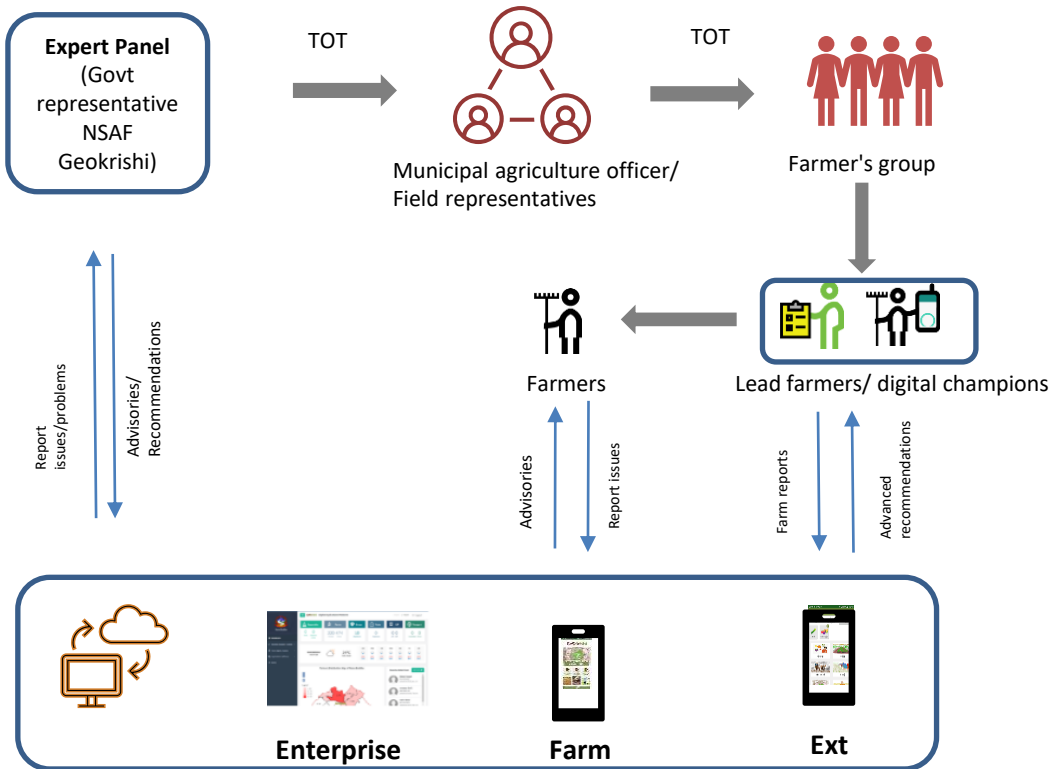




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DIGITAL EXTENSION



Geokrishi Platform

- Access to samuhik bazar
- E-chautaris
- Weather service (5 days forecast)
- Price information
- Health Check: Pest and disease
- Virtual Webinar by experts
- Social media/Group (IMO, Skype, FB, Viber)
- Auto notification
- Bulk notification



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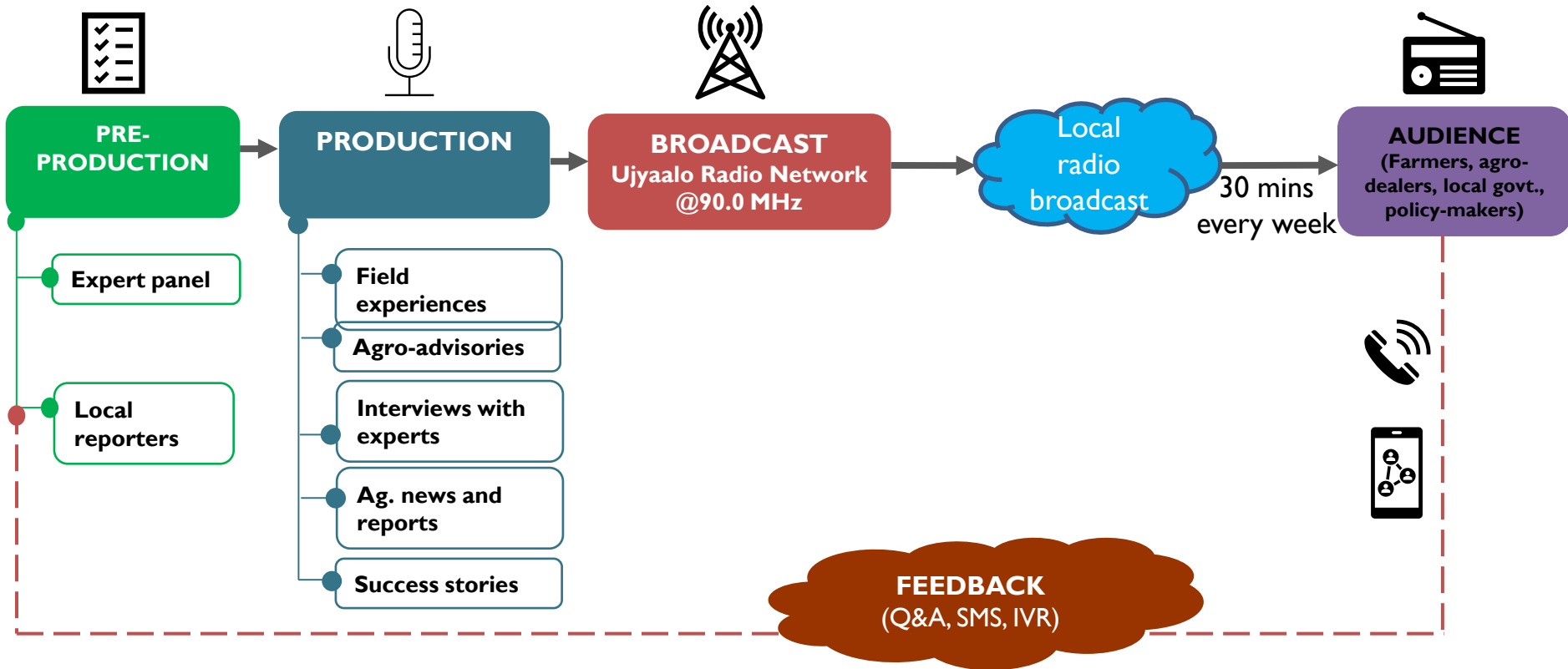


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Radio Program for Communications



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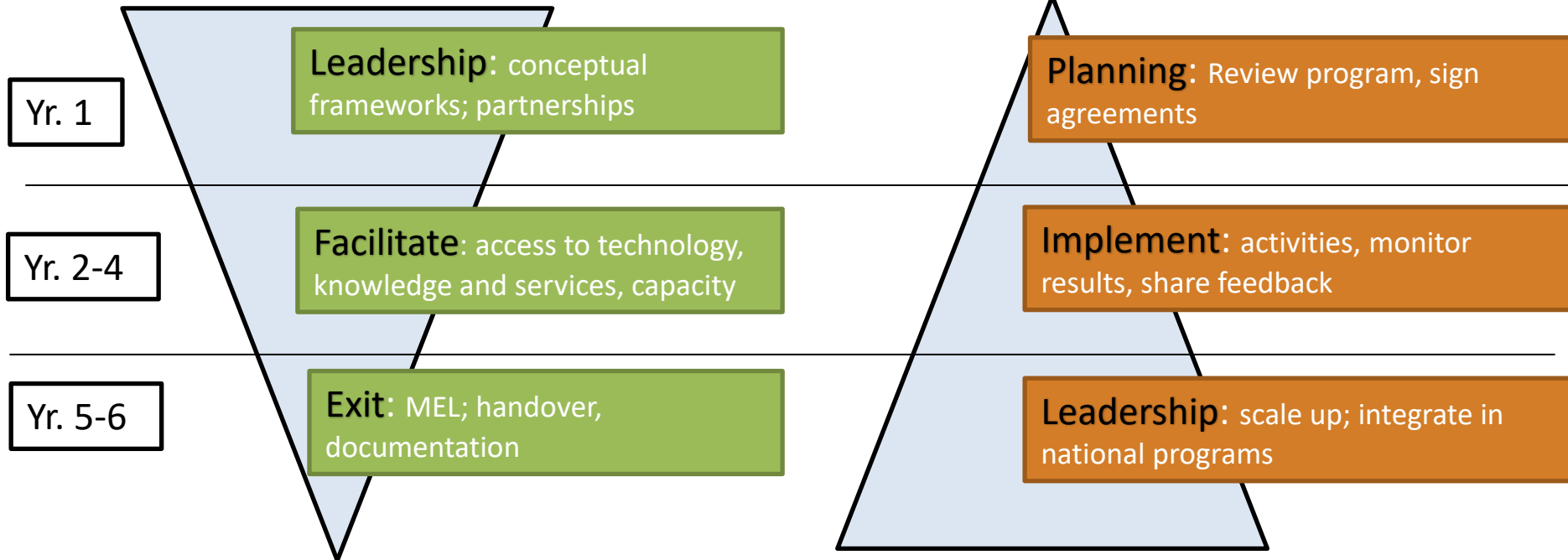




EXIT STRATEGY

NSAF

Partners





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DECISIONS TO BE TAKEN BY JNSC

- Support the varietal registration process through fast-track basis
- Scale the maize commercial model with central and provincial Government programs and projects
- To inform AKCs and IALDOs to support/ facilitate in implementing NSAF's COVID 19 response and recovery action plans.



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